

TYPIFICATION OF PROSOPIS ODORATA TORR. & FREM.
(LEGUMINOSAE)

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Clarification of the concept of *nomina ambigua* and *nomina confusa* in the 1956 edition of the International Code of Botanical Nomenclature makes unnecessary my proposal (1941) that *Prosopis odorata* be included in the list of *Nomina confusa*. Article 66 (Lanjouw, et al., 1956) declares *nomina ambigua* to be illegitimate unless a satisfactory separation of the ambiguous elements can be made. If separation can be made clearly, one constituent must be designated as a lectotype. With this in mind, re-examination of the nomenclatural status of *Prosopis odorata* Torr. & Frem. (in Frem. 2nd. Rept. Expl. Exped. Rocky Mts., Ore., Calif. 313, pl. 1, 1845) is in order.

Three specimen sheets of the Fremont collection upon which *Prosopis odorata* is based are in the Torrey Herbarium, New York Botanical Garden. On each sheet there is a fallen fruiting spike with a cluster of fruits from the screw-bean, *Prosopis pubescens* Benth. The bulk of the material on each sheet consists of vegetative branches with spines, young leaves, and spikes of flowers of the western honey mesquite, *Prosopis juliflora* (Swartz) DC. var. *Torreyana* L. Benson. This mixture of material from two species resulted from collection of specimens in April when the mesquite was developing new leaves and was in flower. Probably the peculiar spiral pods were added from the ground. The two species often grow together along washes or in springy areas, and confusion may have arisen either in collecting specimens or in sorting them. The ambiguity of the type specimen of *Prosopis odorata* has been discussed as follows (Benson, 1941, pp. 753-754):

"Type collections: (1.) *P. odorata*, 'A characteristic tree in the mountainous part of northern [Alta] California, particularly along the Mohave [Mojave] and Virgen rivers [Virgin River in Nevada, Arizona, and Utah] the latter part of April.' According to Torrey, Pac. R.R. Rept. 4:82. 1855, the plant 'is *P. glandulosa* (in flower only), with the pods of *Strombocarpa pubescens*. The error arose from the mixing of specimens in Fremont's collections.' Torrey appended the following note to one of the three type sheets now in the New York Botanical Garden, 'I have scarcely a doubt that the leaves belong to *P. (Algarobia) glandulosa*—the fruit to *Stromb. pubescens*! I was led astray by Fremont placing the pods and the leafy specimens together—.' Interpretations of *P. odorata* have varied. Standley, Contr. U.S. Nat. Herb. 23: 353. 1922, in discussing the nomenclature of *P. juliflora* var. *velutina*, argued as follows: 'In case the plant should receive such recognition [as a species instead of a variety], the proper name for it is *Prosopis odorata* Torr. That name was based upon a flowering specimen of the present plant and fruit of *P. pubescens*, and for that reason has been discarded by most writers. Taking into consideration the specific name, 'odorata,' it seems reasonable to typify the name by the flowering specimen.' The branches with leaves and young flowers included in the type of *P. odorata* are neither *P. glandulosa* (i.e., *P. juliflora* var. *glandulosa*) as supposed by Torrey nor, despite the presence of a few hairs on the rachilla and secondary leaflets, *P. juliflora* var. *velutina* as supposed by Standley. Instead, they are *P. juliflora* var. *Torreyana*. Britton and Rose, N. Amer. Fl. 23: 183. 1928, took up the specific epithet *odorata* under *Strombocarpa* for the screw-bean. According to Article 64 of the In-

ternational Rules of Botanical Nomenclature, 'A name of a taxonomic group must be rejected if the characters of that group were derived from two or more entirely discordant elements, especially if those elements were erroneously supposed to form part of the same individual. A list of names to be abandoned for this reason (*Nomina confusa*) will form Appendix V' [not published]. The writer proposes that *Prosopis odorata* Torr. should be included in this list."

In the light of the 1956 rule, it is fortunate that in this instance segregation is clear and unmistakable, and the choice is easy. *Prosopis pubescens* Benth. (in Hook. Lond. Jour. Bot. 5:82. 1846) is established clearly in nearly all recent literature for the screw-bean, and changing the name by substituting *Prosopis odorata*, published one year earlier, is not desirable, even though this was done by Britton and Rose (loc. cit.). Furthermore, selection of the fruits alone for a lectotype would be less satisfactory than choice of the combination of twigs, leaves, and flowers. So long as *Prosopis juliflora* var. *Torreyana* is considered to be a variety, restriction of the type specimen of *Prosopis odorata* to include only the material from that population system will cause no nomenclatural upset. Therefore, the three sheets in the Torrey Herbarium of the New York Botanical Garden, the fruits excluded, are designated together as a lectotype of *Prosopis odorata* Torr. & Frem.

If the lectotype rule had been adopted before 1941, the writer would have recombined the epithet *odorata* in varietal rank under *Prosopis juliflora* (Swartz) DC. rather than to add the new epithet var. *Torreyana* to the nomenclature. Should var. *Torreyana* be elevated to specific rank, however, it must be known as *Prosopis odorata* Torr. & Frem.

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LITERATURE CITED

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LANJOUW, J., ET AL. 1956. International Code of Botanical Nomenclature adopted by the Eighth International Botanical Congress, Paris, July 1954. Utrecht.

TWO NEW SPECIES OF HELIANTHUS FROM NEW MEXICO¹

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During a field study of the New Mexican species of *Helianthus*, two new species were discovered. Morphologically they appear to be related to *Helianthus ciliaris* DC. but differ from this species in several diagnostic characteristics.

Helianthus heiseri sp. nov. Herba perennis 5-12 dm. alta; caulibus pluribus (vel unica) sparse strigosis, flavo-viridibus, striatis; foliis oppo-

¹ Field work for this study was supported by faculty research grants from the University of New Mexico.